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### **REMARKS AND INTERVIEW SUMMARY**

Applicants thank the Examiner for the interview conducted on March 7, 2007. The content of the interview is summarized by the remarks below.

#### **Rejections under 35 U.S.C. §103**

The rejection of claims 1 – 6, and 8 – 34 under 35 USC 103(a) over US 4,705,619 (McCandlish) in view of US 5,543,035 (Ziemer) and/or in view of US 3,902,988 (Bennett) is respectfully traversed. The rejection fails to provide a prima facie case of obviousness, as the modification of the references proposed in the Office Action would destroy the operability of McCandlish for its intended purpose.

#### **The claimed invention**

The claimed invention requires a sulfided bulk metal catalyst comprising non-noble Group VIII metal molybdate in which at least a portion but less than all of molybdenum is replaced by tungsten, where the bulk metal catalyst prior to sulfidation meets the conditions described in claims 1 and 2. As shown in the formula in claims 1 or 2, the bulk metal catalyst prior to sulfidation does not include a polydentate ligand of any type.

#### **The McCandlish reference requires a structure involving a bidentate ligand**

McCandlish describes hydroprocessing with a self-promoted molybdenum and/or tungsten sulfide catalyst. McCandlish describes the sulfided catalyst at Col. 3, line 45 – Col. 5, line 26. The Examples in McCandlish also provide specific methods of synthesis.

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McCandlish states that the required catalyst is formed by sulfiding a catalyst precursor that includes a polydentate chelating ligand. (Col. 3, lines 7 – 9) McCandlish subsequently makes it clear that the polydentate chelating ligand is a required element. First, at Col. 4, lines 5 – 24 McCandlish states that a monodentate ligand will not form the chelate required to form the catalyst. McCandlish states that monodentate ligands can be used within the catalyst precursor, but at least one polydentate ligand must also be used.

The Examples in McCandlish show that the ligand-containing precursor has a significant impact on activity. Tables 2 – 4 in the Examples of McCandlish show the difference in reactivity between a catalyst prepared by sulfiding a catalyst precursor that includes a polydentate ligand versus a comparative catalyst prepared without the use of a polydentate ligand. Tables 2 – 4 show that the McCandlish catalyst has significantly higher hydroprocessing activity than the comparative catalyst.

Applicants note that all of the Examples in McCandlish, including the comparative Examples showing catalysts not produced according to the McCandlish method, are directed to catalysts containing molybdenum. No working example of McCandlish's intended catalyst is provided that contains both molybdenum and tungsten. Similarly, none of the comparative examples in McCandlish show a catalyst containing tungsten, which is required for the catalyst of the claimed invention.

Removing the polydentate ligand will destroy the operability of the McCandlish reference for its intended purpose

As demonstrated above, it is clear that the polydentate ligand of the McCandlish precursor is an essential element of the precursor. If the ligand is omitted the improved catalyst activity described in McCandlish will be lost. Thus, the Examiner's proposed modification to remove the ligand from the McCandlish reference

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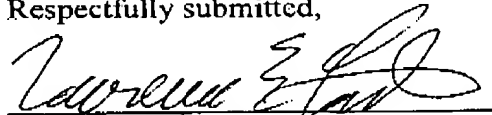
would destroy the operability of the reference for its intended purpose. Such a modification of a reference is not permissible when attempting to form a prima facie case of obviousness.

Based on the above, the rejection fails to provide a prima facie case of obviousness. The McCandlish reference cannot be modified in the proposed manner, and nothing in the Ziemer or Bennett references can cure this deficiency. For at least these reasons, reconsideration and withdrawal of the rejection is respectfully requested.

If there are any questions regarding this supplemental amendment and interview summary, or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1330.

Respectfully submitted,



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☒ Pursuant to 37 CFR 1.34(a)

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